

The environmental eScience revolution

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Environmental science is undergoing a revolution. New technologies are enabling scientists to participate in distributed global collaborations enabled by the internet. This is changing the way that researchers are accessing computing power, scientific data repositories and experimental facilities. This new way of working is referred to as eScience.

The eScience revolution in the environmental sciences is happening at a time when the field is facing huge challenges of the highest possible societal relevance. Climate change and other forms of global change require an understanding of the earth system at levels not previously attempted, while the urgent need for resource and ecological sustainability has radically altered the agendas of subjects as disparate as power-supply engineering and conservation ecology. These drivers have led to a blurring of the boundaries of environmental and computer science leading to genuinely interdisciplinary and exciting science and engineering solutions. Tackling many of the new important questions in environmental science has relied on first-generation eScience applications.

The papers in this issue outline some of the advances in environmental eScience that have revolutionised the way environmental science is carried out.

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